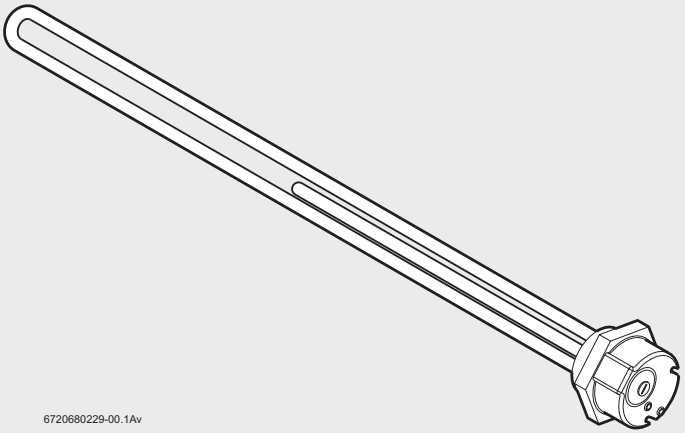

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Index

1 Symbols and Safety precautions

1.1 Explanation of symbols

The **safety instructions** included in the text are highlighted with a warning triangle and marked in grey.

The symbols identify the degree of danger which might occur, if the recommendations provided are not followed.

- **Attention** indicates that slight material damages can occur.
- **Caution** indicates that slight personal injury or severe material damages can occur.
- **Danger** indicates the possibility of severe personal injury. In particularly serious situations there is risk of serious injury or death.

Important notes in the text are marked with the symbol presented on the left. These notes are circumscribed by horizontal lines, above and below the text.

Important notes include instructions for situations which do not involve personal injury or material damage.

1.2 Safety instructions

- In addition to the following instructions, reading of the safety precautions provided in the thermosyphon installation instructions is strongly recommended.

Installation

- The following instructions are for the installation of the electrical element for the thermosyphon and respective electrical connections. It is essential that all precautions are taken to prevent electric shock hazard.
- Make sure that the electric power capacity in the house is sufficient for the correct operation of the heating element together with the other household appliances already in use.
- The installation should only be carried out by a qualified technician.
- The installation should be carried out prior to installation of tank on roof.
- The electrical connection should be done in accordance with AS/NZS 3000:2007.
- First connect the water and only afterwards connect to the electrical supply.
- The heating element should only be connected to the electric current after the installation has been concluded.
- Be aware that there is scalding risk and that the roof may become slippery due to the hot water which will escape from the tank when removing the element.
- The power supply must be protected by an individual circuit breaker at the main electrical supply switchboard and rated to suit the booster size. The supply to the solar water heater can be operated directly from the switchboard or via a remotely mounted switch or time clock as requested by the customer. The heater must be provided with a suitable means for disconnecting the power supply.

Maintenance

- Inspection of the electrical connections and of the heating element and thermostat set by a specialised technician is strongly recommended, at maximum intervals of 2 years.

Client information

- Inform the client about the operation of the heating element and its handling procedures.
- Advise the client that no modifications or repairs should be carried out by person other than licensed technicians.
- Inform the client that in the event that no hot water is used during a significant period of time and/or there is exposure to intense solar radiation, the electricity supply should be switched off.
- Inform the client that in the event that hot water is not used over a long period of time and/ or there is exposure to intense solar radiation (e.g. summer holidays), the tank may reach temperatures higher than the safety control temperature of the thermostat incorporated in the heating element. In such cases it is recommended that a qualified technician be contacted in order to reset the thermostat so that it starts working again.

2 Information on accessories

2.1 Use according to directives

This device complies with the provisions defined in the European directives 2006/95/EC and 2004/108/EC CE.

2.2 Equipment supplied

→ Figure 1, page 10:

1. Heating element with ring sealer
2. Thermostat
3. 1"¼ to 1"½ sleeve with 'ring sealer
4. Rating plate

2.3 Equipment required

- 1x Drill
- 1x 2,5 mm drill
- 1x Philips screwdriver
- 1x Terminal box
- 1x 2,5 mm^2 electric cable
- 1x 16 mm^2 ground wire

2.4 Technical Information

Technical characteristics		
Type of tank	litre	300
Rated output	Watt	3000
Warm-up time (15 °C - 50 °C)		3h48m
Voltage	Vac	230/240
Frequency	Hz	50
Electric current	A	12,5 (AU) 13,0 (NZ)
Section of electric cable to be installed	mm^2	2,5
Level of protection		I
Type of protection		IPX4
Thermostat		
Range of selectable temperatures	°C	10 - 70

Table 1

2.5 Lightning arrestor

The conductive parts of the thermosyphon system should be connected to a ground cable of at least 16 mm^2 and to the voltage controller by a company specialised in electricity.

If there is protective equipment against lightening, the connection of the thermosyphon system to the protective equipment should be inspected by a technician specialised in electricity.

3 Installation

CAUTION:
The installation, the electrical connections, as well as the first start-up are operations to be carried out exclusively by authorised installers.

DANGER: Electrical Protection!
- The heating element should have an independent connection on the electrical switchboard, protected by a current relay and grounding.

WARNING: Damage to heating elements!
- The heating element should be switched on after the system has been filled.

CAUTION:
Never obstruct the bleeder of the safety valve.

The relationship between the power resistance and the volume of the tank should a maximum of 10 W/l. Example: do not use a 3000W resistance in a 200 l tank.

3.1 Assembly

- Remove the maintenance cap (→ Fig. 2).
- Unscrew the 1"½ pipe plug of the orifice of the heating element by turning in a anti-clockwise direction (→ Fig. 3).
- Remove the thermostat from the heating element (→ Fig. 4).
- Screw the heating element in by turning in a clockwise direction (→ Fig. 5).

Before installing the element it may be necessary to apply a 1"¼ to 1"½ sleeve.

In such cases, the sleeve will be supplied together with the equipment.

Only the sleeve provided by the manufacturer should be used.

- Insert the thermostat (→ Fig. 6).
- Pass the electric cable through the sealing gland (→ Fig. 7).
- Connect the power supply and grounding connections to the thermostat and to the electrical switchboard (→ Fig. 8).

NOTE:
The electrical cable is not provided with the device. The cable should be acquired by the qualified technician. The electrical cable should be appropriate for this type of installation, namely with regard to the intensity of the electric current, voltage, resistance to outdoor environments and length.

NOTE:
All the sections of the electrical cable should be protected from the outdoor environment. Therefore, it is recommended to protect them with a plastic tube or other waterproof material.

- Adjust the thermostat to the desired temperature at which the heating element is switched off (→ Fig. 9, position 2).

The thermostat must be set to 60 °C, which corresponds to the position of the pointer as shown in Fig. 9.

- Proceed in filling the tank with cold water from the water supply, as indicated in the thermosyphon installation instructions.
- Switch on the electrical circuit breaker.
- After 4 hours check for leaks.
- Tighten the maintenance cap again (→ Fig. 10).

NOTE:

The maintenance cap should be fixed with 4 screws for enhanced sealing and to prevent possible leaks near the electrical connections.

- Make 2 extra holes with a diameter of 2,5 mm on the maintenance cap (→ Fig. 11).
- Apply the cap to those 2 holes with the screws provided (→ Fig. 11).
- Glue on the rating plate of the heating element provided with the equipment (→ Fig. 12).

DANGER:

Scalding Risk

By touching the heating element. When removing the element a significant volume of hot water will escape from the tank.

3.2 Energy saving

In order to minimize the consumption of electrical energy, the user may:

- using the breaker, manually, switch the power supply on or off, taking into account if the period is of low or high solar radiation.

4 Maintenance

Inspection of the electrical connections and of the heating element and thermostat set by a specialised technician is strongly recommended, at maximum intervals of 2 years.

Ensure that the electrical capacity of the house is sufficient for the correct operation of the heating element together with the other appliances already in use.

The PTR valve should be periodically bled to remove metal filing deposits or other types of dirt and check if the purge valve is not obstructed.

Restarting the power supply

Check the need to restart the heating system.

- Press the restart pin on the safety thermostat (→ Fig. 9, position 1).

Draining the system

Be aware that there is scalding risk and that the roof top might be slippery.

- Switch off the electrical supply by using the breaker.
- Close the water flow.
- Open a hot water tap.
- Open the safety valve purge.

5 Annex

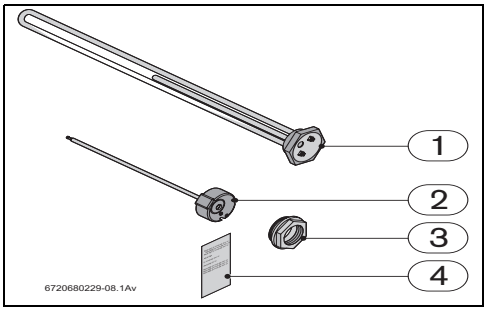

Fig. 1

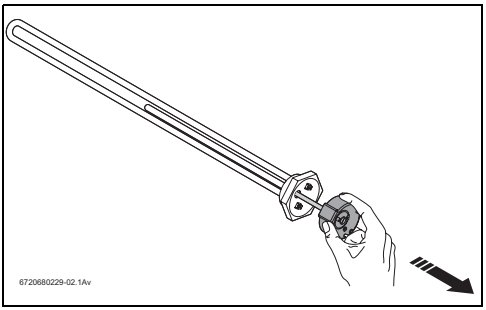

Fig. 4

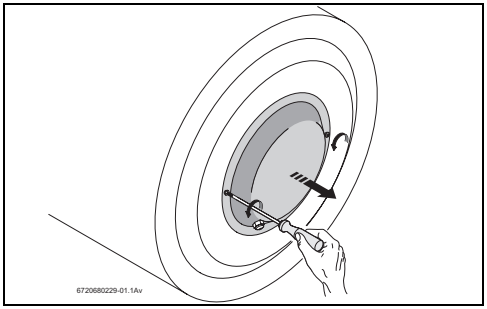

Fig. 2

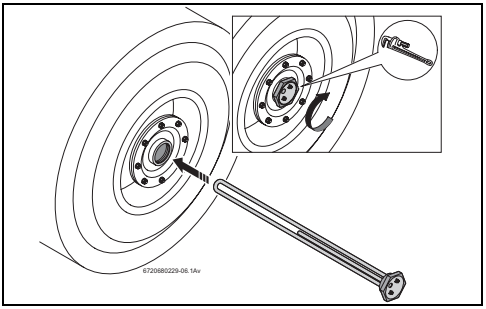

Fig. 5

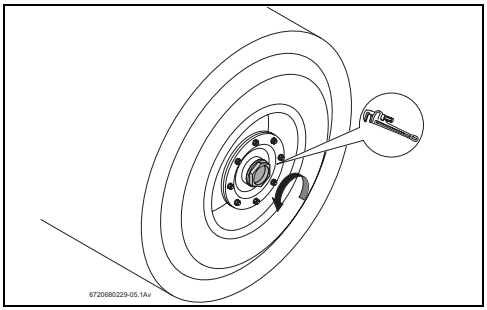

Fig. 3

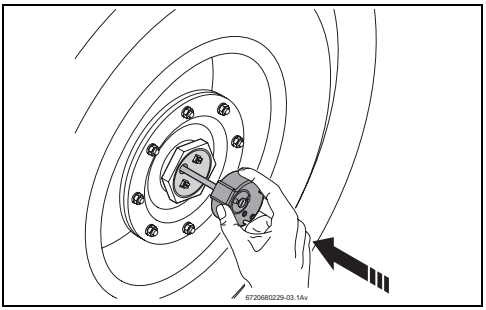

Fig. 6

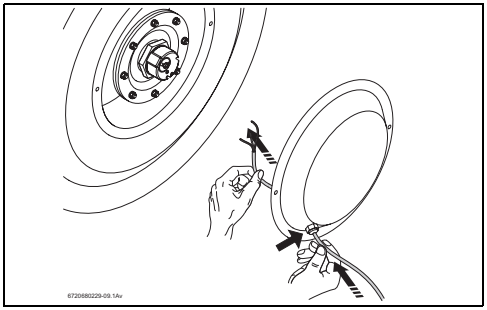

Fig. 7

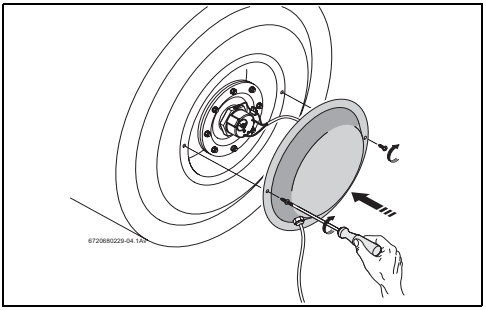

Fig. 10

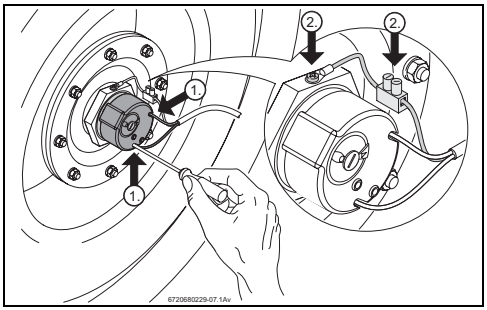

Fig. 8

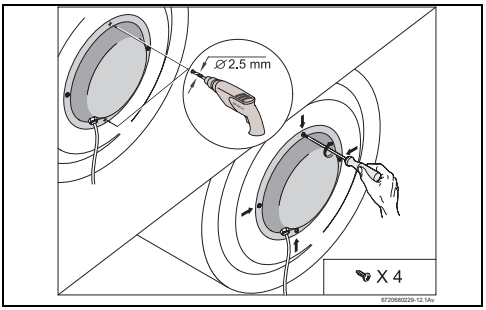

Fig. 11

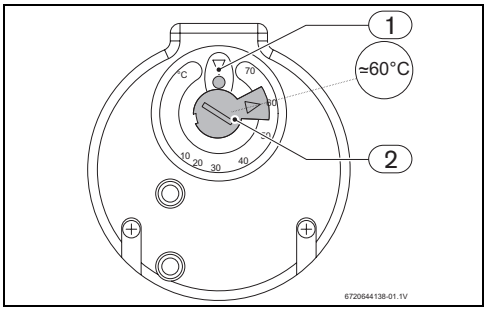

Fig. 9

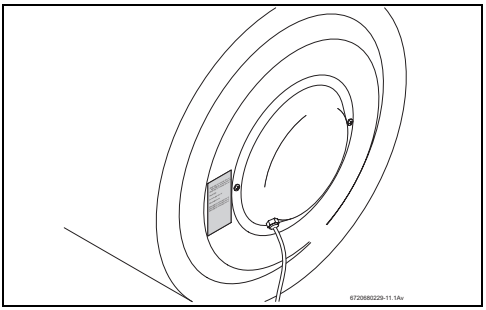

Fig. 12

Australia
Robert Bosch (Australia) Pty Ltd
1555 Centre Rd
Clayton, VIC 3168
Phone 1300 30 70 37
Fax 1300 30 70 38
www.bosch.com.au/hotwater